GCHQ

Bude Sigint Development

NETWORK ANALYSIS CENTRE

NAC BUDE Partnership
SATELLITE TELEPORT KNOWLEDGE

Contents

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Bude Sigint Development

NETWORK ANALYSIS CENTRE

Summary:

Development of in depth knowledge of key Satellite IP service providers in Germany in support of a wider TR requirement on developing German IP transit knowledge.

For each of the following companies

Stellar (AS35207)
Cetel (AS39151)
IABG (AS29259) - (Note this may have already been looked at by NSA NAC..)

Develop a detailed understanding of network infrastructure, focusing on:

- IXP points. Points where the teleport (ground station) connects to the wider Internet. In particular looking for potential access chokepoints.

Develop a wider understanding of the network as a whole.

- Develop and task key engineers / staff.
- Identify key customers, IP allocations and frequency plans in support of survey.
- Examine potential equipment suppliers and future tech trends.
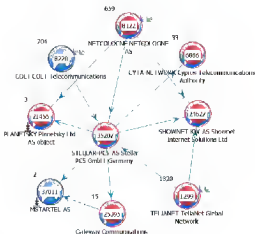
This task is part of a wider task to look at developing possible access opportunities with Sigint partners requested by ⬛⬛⬛ and ITT. It is also designed to allow NAC Bude to begin looking at network analysis that directly connects to their access, and encourages new SD work against key ISPs in future.

Stellar

Autonomous System: 35207

From ServerSniff

From Robtex

Generated via TeasureMap

IP Ranges:

80.92.48.0/20

Servers of Interest:

FTP: 80.92.48.

Dns2.stellar-dbs.com: 80.92.48.
Dns2.stellar-pcs.com
Dns2.stellar-bbs.com
Dns2.onf.stellar-pcs.com

Dns0.stellar-dbs.com: 80.92.48.
Dns0.stellar-pcs.com
Dns0.stellar-bbs.com
bellini.stellar-pcs.com

Mx1.stellar-dbs.com: 80.92.48
Mx1.stellar-pcs.com
Mx1.onf.stellar-pcs.com

Routers Found on Tidal Surge:

Router Interface					
Router Interface	80.92.48.	FastEthernet0/1	255.255.255.128	No Description	Router: CGN-7206-7
Router Interface	80.92.48.	FastEthernet0/0	255.255.255.252	No Description	Router: Cisco7206-2
Router Interface	80.92.56.	FastEthernet5/1/0	255.255.255.0	*** PAKSAT SIMPLEX 3 E3 TESTING ***	Router: rwp44d2
Router Interface	80.92.56.	Async1	255.255.255.0	*** Policy Routing for Touchstone to 3rd/1st STM1 ***	Router: rwp44d2

Edge Routers:

See attached file Stellar.jmz for more detail

Employees:

Christian Steffen ███████ @stellar-pcs.com or .de - CEO of Stellar DBS
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Oliver Skaletz █████████ @stellar-pcs.com

███████ @stellar-pcs.com

Customers/Partners:

Company	Satellite	Mission Di...raph
Eutelsat	W5	
	W6	
	Hotbird 8	
	Atlantic Bird 1	
Intelsat	7	
	10	
RSCC	Express AM1	
	Express AM22 (Sesat 2)	
	Express A3	
Paksat	1	
Arabsat	2B	
	Badr-4	
Sirius	4 (Astra 4A)	

- PlanetSky
- Horizon

Other information of interest:

The login details to the stellar hub are as follows.
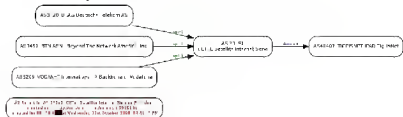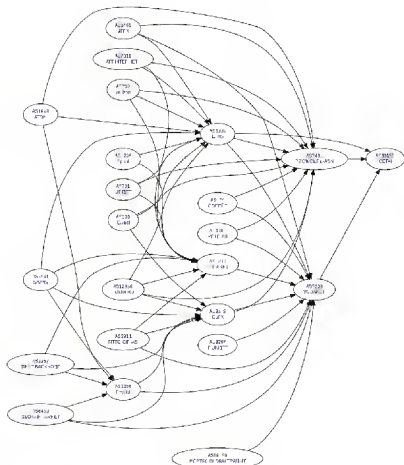
> 82.205.224█ or 80.92.49█

> horizon

> h0riz0n

Horizon NMS server #1: 00:21:5E ███████
> Horizon NMS server #2: 00:21:5E ███████

Ce-Tel

Autonomous System: 39151

From ServerSniff

From Robtex

Generated via TeasureMap

IP Ranges:

91.151.157.0/24
87.238.112.0/21
87.238.118.0/24
91.151.144.0/20
85.31.80.0/20
91.151.147.0/24
87.238.119.0/24
91.151.154.0/24
95.128.16.0/21
85.31.80.0/21
85.31.88.0/21
91.151.149.0/24
195.69.163.0/24

195.78.224.0/24 - CeTel network for PAKSAT

Servers of Interest:

Ns1.ce-tel.net – 87.238.112 ▮▮▮▮
Ns2.ce-tel.net – 91.151.144 ▮▮▮▮▮▮
Mail1.ce-tel.net – 87.238.112 ▮▮▮▮▮▮▮
Mail.ce-tel.net – 91.151.144 ▮▮▮▮▮▮

Edge Routers:

See attached file Cetel.jmz for more detail

Customers/Partners:
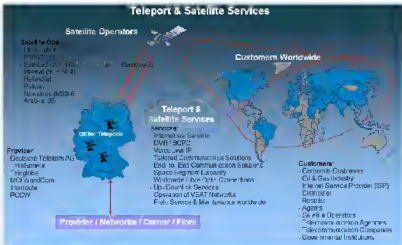
Company	Satellite	Mission Di..ch
ABS	1	
Intelsat	4 (PAS-4)	
	902	
	904	
EutelSat	W1 (Eurobird 1)	
	W3A	
	W5	
	Sesat – 2 (Ex. ress AM22)	
	Eurobird-2	
Hellassat	2	
Paksat	1	
SES Newskies	NSS-6	
Arabsat	2B	

- Talia
- Sat Link
- T-Systems/Telecom
- Etisalat
- IDirect Technologies
- Cable and Wireless
- Orange

- Newtech
- TeliaSonera
- Sematron UK
- Radyne
- VSNL International
- Global Crossing
- ND SatCom
- Reach
- Satrexx
- Equant
- MCI
- Paradise Datacom
- Codan
- Andrew
- BT
- Teleglobe
- Uruk
- Siemens

IABG

Autonomous System: 29259

From Robtex

This information is exempt from disclosure under the Freedom of Information Act 2000 and may be subject to exemption under other UK information legislation. Refer disclosure requests to GCHQ on
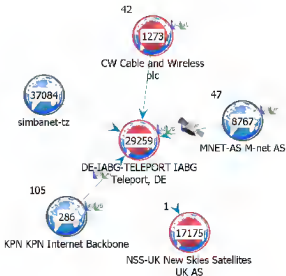
Generated via TreasureMap

IP Ranges:

196.44.170.0/24
93.91.80.0/20
41.221.43.0/24
83.170.0.0/18
84.11.0.0/16
217.26.240.0/20
212.6.46.0/23

Servers of interest:

Ns1.iabg.de – 84.11.16.

Routers Found on Tidal Surge:

Router Interface	84.11.54.	FastEthernet0/0	255.255.255.0	No Description	Router: 2610
Router Interface	84.11.48.	FastEthernet0	255.255.255.224	No Description	Router: AS5300
Router Interface	84.11.48.	Group-Async1	255.255.255.224	No Description	Router: AS5300
Router Interface	84.11.48.	Serial0	255.255.255.224	No Description	Router: AS5300
Router Interface	84.11.33.	FastEthernet0	255.255.255.0	No Description	Router: AS5300-Heraat
Router Interface	84.11.33.	Group-Async0	255.255.255.0	No Description	Router: AS5300-Heraat
Router Interface	84.11.107.	Ethernet0	255.255.255.252	Multan DVB	Router: AS5300-Multan
Router Interface	84.11.28.	FastEthernet0	255.255.255.224	No Description	Router: AS5300 ghilas
Router Interface	84.11.28.	Serial0	255.255.255.224	No Description	Router: AS5300 ghilas
Router Interface	84.11.42.	FastEthernet0/0	255.255.255.224	No Description	Router: AS5400-1
Router Interface	84.11.107.	Serial0/0/0	255.255.255.0	InternetLink	Router: ArbilSite
Router Interface	84.11.140.	FastEthernet0/0	255.255.255.0	WanLink	Router: ArbilSite
Router Interface	84.11.25	Ethernet0	255.255.255.0	No Description	Router: Alrak
Router Interface	84.11.43	FastEthernet0	255.255.255.240	No Description	Router: DIG-SCPC6
Router Interface	84.11.140	Serial0/0/0	255.255.255.0	DVB	Router: DVB
Router Interface	84.11.140	FastEthernet0/0	255.255.255.0	No Description	Router: DVB
Router Interface	84.11.140	FastEthernet0/0	255.255.255.240	No Description	Router: FTP
Router	84.11.140	Serial0/0	255.255.255.240	No Description	Router: FTP

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Interface					
Router Interface	84.11.77	Ethernet0/0	255.255.255.192	No Description	Router: GW2610
Router Interface	84.11.77	Serial0/0	255.255.255.192	No Description	Router: GW2610
Router Interface	84.11.77	FastEthernet4/1	255.255.255.192	No Description	Router: GW3845
Router Interface	84.11.62	FastEthernet0/0	255.255.255.0	Gateway	Router: Gateway
Router Interface	84.11.62	Serial0/0/0	255.255.255.0	Sat	Router: Gateway
Router Interface	84.11.62	FastEthernet0	255.255.255.0	No Description	Router: Gateway_3
Router Interface	84.11.62	FastEthernet0	255.255.255.0	No Description	Router: Gateway_4
Router Interface	84.11.62	FastEthernet0	255.255.255.0	IPCALLER	Router: Gateway_5
Router Interface	84.11.7	FastEthernet0/0	255.255.255.240	outside$ETH-LAN$	Router: Hillah
Router Interface	84.11.114	GigabitEthernet0/2	255.255.255.192	No Description	Router: ISP-1
Router Interface	84.11.115	GigabitEthernet0/1	255.255.255.224	No Description	Router: ISP-1
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: JT001
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: JT002
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: JT004
Router Interface	84.11.113	FastEthernet0/0	255.255.255.240	No Description	Router: JT004
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: JT005
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: JT006
Router Interface	84.11.113	FastEthernet0/0	255.255.255.240	No Description	Router: JT006

Router Interface					
Router Interface	84.11.113.	Serial0/0/0	255.255.255.240	No Description	Router: JT008
Router Interface	84.11.113.	FastEthernet0	255.255.255.240	No Description	Router: JT008
Router Interface	84.11.113.	FastEthernet0/0	255.255.255.240	No Description	Router: JT008
Router Interface	84.11.113.	FastEthernet0	255.255.255.240	No Description	Router: JT013
Router Interface	84.11.113.	Serial0	255.255.255.240	No Description	Router: JT013
Router Interface	84.11.85.	Ethernet0/0	255.255.255.240	No Description	Router: MAHMOD
Router Interface	84.11.41.	Ethernet0	255.255.255.192	No Description	Router: QRANUS
Router Interface	84.11.41.	Serial0	255.255.255.192	No Description	Router: QRANUS
Router Interface	84.11.93.	GigabitEthernet0/0	255.255.255.0	SETH-LANSSETH-SW-LAUNCHSSINTF-INFO-GE 0/0$	Router: PRESS-Router
Router Interface	84.11.14.	Ethernet0/0	255.255.255.248	No Description	Router: Router
Router Interface	84.11.14.	Serial0/0	255.255.255.248	No Description	Router: Router
Router Interface	84.11.19.	FastEthernet0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.29.	Ethernet0	255.255.255.192	No Description	Router: Router
Router Interface	84.11.85.	Serial0	255.255.255.192	No Description	Router: Router
Router Interface	84.11.85.	Ethernet0/0	255.255.255.224	No Description	Router: Router
Router Interface	84.11.32.	Ethernet0	255.255.255.0	No Description	Router: Router
Router Interface	84.11.32.	Serial0	255.255.255.0	No Description	Router: Router
Router	84.11.36.	FastEthernet0	255.255.255.192	No Description	Router: Router

Interface					
Router Interface	84.11.36	Serial0	255.255.255.192	No Description	Router: Router
Router Interface	84.11.61	FastEthernet0/0	255.255.255.224	No Description	Router: Router
Router Interface	84.11.80	FastEthernet0	255.255.255.192	No Description	Router: Router
Router Interface	84.11.88	FastEthernet0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.88	FastEthernet0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.88	FastEthernet0/0	255.255.255.248	No Description	Router: Router
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.113	FastEthernet0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.113	FastEthernet0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.137	FastEthernet0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.137	Serial0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.139	FastEthernet0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.139	Serial0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.140	Ethernet0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.140	Serial0/0	255.255.255.240	No Description	Router: Router
Router Interface	84.11.249	FastEthernet0	255.255.255.240	No Description	Router: Router

Router Interface					
Router Interface	84.11.60	FastEthernet0/0	255.255.255.240	No Description	Router: Router-243
Router Interface	84.11.26	FastEthernet0/0	255.255.255.224	No Description	Router: Router71
Router Interface	84.11.138	FastEthernet0	255.255.255.224	No Description	Router: SKYBAGHDAD012
Router Interface	84.11.138	Serial0	255.255.255.224	No Description	Router: SKYBAGHDAD012
Router Interface	84.11.138	FastEthernet0	255.255.255.224	No Description	Router: SKYBAGHDAD013
Router Interface	84.11.138	Serial0	255.255.255.224	No Description	Router: SKYBAGHDAD013
Router Interface	84.11.138	Serial1	255.255.255.224	No Description	Router: SKYBAGHDAD013
Router Interface	84.11.138	FastEthernet0/0	255.255.255.240	No Description	Router: SkyBagh03
Router Interface	84.11.32	Ethernet0	255.255.255.224	No Description	Router: UROM-1
Router Interface	84.11.32	Virtual-Template1	255.255.255.224	No Description	Router: UROM-1
Router Interface	84.11.75	FastEthernet0/0	255.255.255.224	No Description	Router: V161
Router Interface	84.11.60	GigabitEthernet0/0	255.255.255.252	RECEIVE _ DISH	Router: factory3845
Router Interface	84.11.60	Serial0/0/0	255.255.255.252	SEND_DISH	Router: factory3845
Router Interface	84.11.60	Loopback0	255.255.255.252	No Description	Router: factory3845
Router Interface	84.11.4	FastEthernet0/0.6	255.255.255.0	TKC.TRANS Segment	Router: gate.tkckish.com
Router Interface	84.11.141	FastEthernet0/0	255.255.255.224	No Description	Router: iConnect
Router Interface	84.11.141	Serial0/0	255.255.255.224	No Description	Router: iConnect
Router Interface	84.11.141	Ethernet0	255.255.255.240	No Description	Router: iraq1
Router Interface	84.11.141	Serial0	255.255.255.240	No Description	Router: iraq1

Interface					
Router Interface	84.11.38	FastEthernet0/0	255.255.255.248	No Description	Router: net
Router Interface	84.11.39	Serial1/0	255.255.255.248	No Description	Router: net
Router Interface	84.11.39	Virtual-Template1	255.255.255.248	No Description	Router: net
Router Interface	84.11.39	Loopback1	255.255.255.252	No Description	Router: net
Router Interface	84.11.41	Ethernet0	255.255.255.192	No Description	Router: router
Router Interface	84.11.41	Serial0	255.255.255.192	No Description	Router: router
Router Interface	84.11.30	FastEthernet0/0	255.255.255.248	No Description	Router: saeed
Router Interface	84.11.113	FastEthernet0/0	255.255.255.240	No Description	Router: skyb28
Router Interface	84.11.113	Serial0/0/0	255.255.255.240	No Description	Router: skyb28
Router Interface	84.11.141	Ethernet0/0	255.255.255.240	No Description	Router: skybaghdad16
Router Interface	84.11.141	Serial0/0	255.255.255.240	No Description	Router: skybaghdad16
Router Interface	212.6.47	FastEthernet0/1	255.255.255.248	No Description	Router: 3662
Router Interface	212.6.47	Serial1/0	255.255.255.248	No Description	Router: 3662
Router Interface	212.6.46	Ethernet0/0	255.255.255.0	Connected to Mirdamad	Router: Mir_Int
Router Interface	212.6.46	Serial0/0	255.255.255.0	Connected to Satellite	Router: Mir_Int

Edge Routers:

See IABG.jmz for more details.
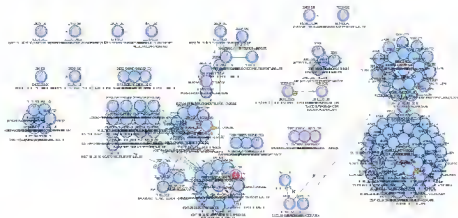
Gateway Routers:
134.222.112█

Employees:

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████████ @iabg.de

Customers/Partners:

IABG - Teleport Facilities

OTTOBRUNN Site
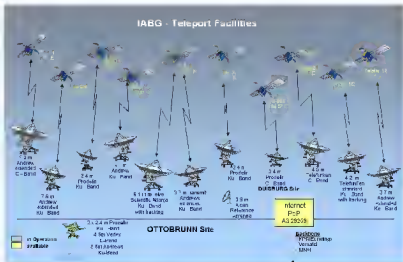
Company	Satellite	Mission Digraph
ABS	1	
Hellassat	2	
Intelsat	905	
	12	
Arabsat	Badr-4	
Eutelsat	W6	
Gazprom	Yamal 202	
Turksat	1C	
Telstar	12	

- T-Systems/Telecom
- KPN
- M-Net
- Versatel